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ABSTRACT

This report outlines the results of two technology-based open learning pilot projects which focused on 600 women living in rural areas of the Southland and Hauraki-Coromandel regions of New Zealand. The technologies used were computer-assisted instruction, teleconferencing, and audio- and videotape recordings. An outline of project steering committee responsibilities is followed by descriptions of project factors and parameters, project organization, project outcomes, and future challenges for planners of open learning systems. It is noted that, as a result of these projects, the steering committee concluded that successful open learning occurs when: (1) students decide where, when, and how they want their course structured; (2) the curriculum and course are sensitive to the needs of students; (3) the course is modularized so as to give flexibility to students and tutors; (4) students can select and use technologies to enhance their learning through a range of delivery systems and modes of learning; (5) training is provided for those who lead open learning with a distance learning component; and (6) cooperation exists between individuals, educational agencies, and providers. Appended include: a breakdown of pilot program costs, a directory of technology options for open learning and distance education, a list of project personnel, a summary of the students' evaluations, and a checklist of questions pertinent to the planning of open learning programs. (GL)

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FROM SLATES TO SATELLITES

REPORT ON OPEN LEARNING WITH

NEW TECHNOLOGIES FOR RURAL COMMUNITIES

Cover design:
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Department of Education
Wellington
NEW ZEALAND

December 1988

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FOREWORD

Open learning with new technologies for rural communities makes "From Slates to Satellites" an apt title for this report.

"From Slates to Satellites" is a positive record and a special tribute to those who organised two pilot technology-based open learning projects. Over 600 women in the Southland and Hauraki-Coromandel regions now have more understanding of the use of new technologies as a result of their continuing education. I am sure these women would want to pay tribute to the network of women who effectively co-ordinated for them the open learning project in their region. Alison Broad, Southland, and Pennie Brownlee, Hauraki-Coromandel rightly deserve our gratitude and praise.

Jeanne Macaskill, the project officer, did a magnificent job. Jeanne's challenge was to ensure steering committee members, the polytechnics involved and project co-ordinators received the professional education services they needed to carry out their responsibilities. Jeanne fulfilled this challenge with dedication and quiet determination to students benefit and the laudatory appreciation of us all.

Val Brooke-White, Neville Lane, Jeanne Macaskill, Jim McIntyre and Lawson Robertson were members of the Department of Education's Open Learning Steering Committee. Members contributed in a special way to the success of the programme. I am most grateful to them. We record our appreciation of Keren Lavell, committee secretary, who supported us in all our deliberations. Papai McMillan who typed this report deserves special praise for her skill and expertise in word processing.

The open learning pilot projects have been successfully completed. This report evidences the principles, organisation and outcomes of these innovative projects. I share the hope of many people that there will be beginnings for open learning with new technologies throughout New Zealand.

We are pleased to share this report with you. May it inspire and guide you to promote further open learning initiatives.

David Lawrence
Chairperson, Open Learning Steering Committee and
Acting Director of Continuing Education

EXECUTIVE SUMMARY

This report outlines the results of two technology based open learning pilot projects for people at a distance from an educational institution.

Many housebound and rural students are disadvantaged because they cannot attend class contact institutions. For these reasons the steering committee targeted women who lived in the rural areas of the Southland and Hauraki-Coromandel regions.

As a result of these projects the committee concluded successful open learning occurs when:

* students decide where, when and how they want their course structured;

* the curriculum and course are sensitive to the needs of students;

* the course is modularised so as to give more flexibility to students and tutors;

* students can select and use technologies to enhance their learning through a range of delivery systems and modes of learning;

* training is given to those who lead open learning courses with a distance learning component;

* there is co-operation between individuals, educational agencies and providers to ensure students receive quality open learning resources and services.

The sections of this report which follow amplify the above outcomes. These sections, however, cannot adequately reflect the co-operation and enthusiasm of many people. Networks of non-formal education were established, social interaction occurred and students benefited from their course. New educational horizons were realised.

Worldwide, more people are educated through distance education than by any other means. It is hoped this project will enable more people disadvantaged by distance to have a range of open learning programmes made available to them.

SECTION I

THE STEERING COMMITTEES RESPONSIBILITIES

BACKGROUND

1.1 In 1986 the Government allocated funds to investigate innovative forms of post-compulsory education which used new technologies and modes of delivery for distance learning.

STEERING COMMITTEE MEMBERSHIP

1.2 The Department of Education formed a steering committee comprised of representatives of the Broadcasting Corporation of New Zealand, Christchurch Polytechnic the Department of Education, Radio New Zealand Limited and the New Zealand Technical Correspondence Institute. Steering committee members as at July 1988 were:

David Lawrence	Department of Education (Chairperson)
Val Brooke-White	Radio New Zealand Limited
Neville Lane	Broadcasting Corporation of New Zealand
Jeanne Macaskill	Department of Education (Project Officer)
Jim McIntyre	NZ Technical Correspondence Institute (NZTCI)
Lawson Robertson	Department of Education

1.3 Keren Lavell, Assistant Advisory Officer, Department of Education, acted as committee secretary.

1.4 Ray Thorburn, Department of Education and Brian Pauling, Christchurch Polytechnic were members for 1987 and part of 1988.

STEERING COMMITTEE PROGRAMME

1.5 The steering committee first investigated overseas delivery modes with particular reference to the British open-tech model. With funds constraints the open-tech model was not achievable. The steering committee instead concentrated on two open learning projects which used various media to provide open learning at a distance.

1.6 Until December 1987 the committee focused on the establishment of a framework for the design of pilot inter-agency, multi-media open learning programmes. From May to December 1987, Brian Pauling, HOD Media Studies, Christchurch Polytechnic, undertook a preliminary needs assessment, research and marketing assignment. This exploratory and developmental phase proved both time consuming and expensive. As a result of Brian Pauling's assignment the emphasis shifted to the practical design, delivery and evaluation of two pilot programmes in the Southland and Hauraki-Coromandel regions. To plan and organise the implementation and delivery phases of the project Jeanne Macaskill, Wellington College of Education was seconded to the Department of Education.

1.7 The combined expertise of the committee ensured the pilot projects were carefully planned, co-ordinated and monitored. This was with regard to course materials, the selection of technologies and the budget. Regular steering committee meetings provided the means to exchange information, make joint executive decisions and monitor finances. This was particularly so as the pilot projects came on-stream.

1.8 Appendix A, pages 23 and 24 sets out the programme budget for the $205,000 allocated by government. As the pilot projects became operational budget management and expense control became a high priority of the steering committee. As already noted development expenses were higher than realised. Therefore, if regional pilot operating costs were not controlled there could have been cost overruns. The committee was resolute in its aim not to exceed budget allocations. This generated some criticisms. The outcome was that programme costs matched the Government's allocation.

1.9 As noted in Appendix A the programme could not have kept to budget limits without people's voluntary efforts and extra contributions of educational organisations. Organisers of future projects of this type are strongly recommended to introduce from the outset effective financial management systems to account for budgeted and actual expenditure.

SUMMARY

1.10 The challenge to the steering committee given the student target group was to identify the best means of open learning through distance education. After extensive investigations the committee agreed to two pilot projects which targeted women in the Southland and Hauraki - Coromandel regions. The remainder of this report outlines the processes and outcomes of the two open learning pilot projects.

SECTION 2

PROJECT FACTORS AND PARAMETERS

INTRODUCTION

2.1 The control factors and parameters for the pilot projects centred on technology choices, the target student group, the curriculum, course materials, course services and funds. The report, Learning At A Distance, Department of Education, 1977 provided a helpful frame of reference. This report made a thorough investigation into learning at a distance.

OPEN LEARNING RATIONALE

2.2 Open learning is an educational process in which the student has control of their learning. It should be available at a convenient time and place and structured to suit students. Further, courses should be provided at students level of interest with content students have requested.

2.3 In open learning students choices are foremost. The steering committee applied to these pilot projects the above open learning rationale as follows:

- Visited regional centres to ask students their courses and delivery system preferences and how long they would like the course.
- Involved students in curriculum planning.
- Designed course modules to allow students to withdraw and later rejoin the course if they wished.
- Agreed to student preferences for the mix of learning technologies to be used.
- To minimise travel set up centres near to where students lived.
- Wrote courses at students understanding and interest levels
- Provided a two-level course in Southland.

- Offered alternative afternoon or evening teleconferencing sessions.

- Allowed students to use other centres facilities.

- Encouraged students to use an audio tape to communicate with their tutor instead of by letter.

- Designed a course in which students were assessed in terms of their competency achievement rather than by marks or grades.

TECHNOLOGY CHOICES

2.4 Budget and time limitations restricted the opportunity to trial some types of new technology. Practical aspects of delivery modes were also considered. Other technologies with Educational Potential were unavailable in New Zealand at this time. It was decided the projects should focus on interactive individual learning opportunities.

2.5 Given the constraints and options it was agreed to use a mixture of other technologies. These included teleconferencing in Southland and computers for the Hauraki-Coromandel project. Both projects used video tapes.

TARGET STUDENT GROUP

2.6 After consideration of possible target groups, rural women were chosen for a number of reasons. These were because:

- it was difficult for rural women to travel to an educational institution

- current distance education programmes specifically for women are mainly for non-formal courses

- rural women do not have the same continuing education opportunities as their urban peers

- courses could capitalise on existing rural womens networks.

The Southland and Hauraki-Coromandel regions were selected as suitable pilot project areas.

CURRICULUM

2.7 As already indicated an open learning curriculum should be developed in cooperation with students. This ensures students on-going interest, motivation and support for their course. This approach stresses the important principle of open learning that students be involved in all aspects of the course. Students preferences are a vital component in open learning curriculum design and development.

2.8 A different approach was taken for the curriculum in each region. Six Southland students and the project officer wrote their course outline. This was based the views of many women who had attended centre meetings. The six women also recommended the length of the course, the technologies to be used and course delivery systems.

2.9 For the Hauraki-Coromandel project students views were determined by a postal survey after the course theme had been decided by group meetings. This was a less expensive exercise. For this course Pennie Brownlee supervised the development of all course materials so that it properly represented students views.

TUTORS

2.10 Effective tutors are essential for distance education. Even if tutors are experienced teachers they must meet to become familiar with the course objectives and course materials, and to establish a common tutoring approach. This ensures all students will have similar learning outcomes and benefits. Tutors may also need training sessions in the skills required to tutor at a distance.

2.11 A distance education student needs to have access to a personal tutor. 200 students per tutor is a standard international allocation in distance tuition. For these projects it was decided 1.5 tutors be engaged to meet 300 students needs. This was a minimal tutor allocation but back-up services were provided to package resources and send out materials. For the Southland project back-up services could not be arranged. This limited tutors primary role to answering individual student's enquiries. For the Hauraki-Coromandel project the course materials were packaged at Waikato Polytechnic but distributed by centre co-ordinators.

TIME FRAMES

2.12 Time frames are critical to plan, produce and deliver open learning at a distance. It took nearly a year to define the parameters of the project. This left just over a year to produce course materials, to organise and deliver the courses and to evaluate them. This was of concern to representatives of Radio New Zealand and NZTCI who have had considerable experience in the preparation and presentation of programmes of this type. Their concern was for the production of quality course materials in such a short time. Due to the energy and goodwill of project personnel the courses were effectively delivered. Appendix D lists many of these people.

SUMMARY

2.13 Given the innovative nature of these programmes, the exploration and determination of appropriate projects absorbed considerable time. Technological and educational feasibility and appropriateness were critical factors which had to be carefully assessed. Once these matters had been settled the processes to be used required careful attention. The establishment of effective rapport, understanding and support of the people to be involved became the most important phase of the projects. Effective consultation among course organisers, tutors and students and the implicit involvement of all parties is a vital factor in open learning. This will ensure students needs, time frames and programme objectives are met.

SECTION 3

PROJECT ORGANISATION

INTRODUCTION

3.1 To co-ordinate the projects Jeanne Macaskill was seconded to the Department of Education as project officer. She ensured the effective linkage of the pilots with project organisers, polytechnics and related agencies. This linkage was particularly important as the projects were funded by the Government for which there was an important accountability dimension. Jeanne Macaskill also had an important quality assurance role. This involved her development and oversight of course materials. These materials were also reviewed by steering committee members.

3.2 Different organisation procedures were adopted for each pilot. For the Southland pilot, Alison Broad, Community Education Officer, Southland REAP worked in conjunction with Southland Polytechnic. The project officer developed course materials. Southland Polytechnic provided professional and administrative services while Alison Broad co-ordinated the pilot.

3.3 The Hauraki-Coromandel project by contrast was managed by Waikato Polytechnic. Pat Irving, Christine Scott and Pennie Brownlee were the project organisers whose team of support personnel are listed in Appendix D. These people developed and produced audio, video and written resources.

3.4 To plan open learning projects consideration must be given to the most appropriate means of design and delivery. This has to have particular reference to established institutions, community networks and the students preferences.

SOUTHLAND PILOT PLANNING

3.5 In December 1987 20 centres in Southland were visited by representatives of the steering committee and Alison Broad. Students requested their course be called "From Slates to Satellites - keeping up with change".

3.6 The curriculum written with the help of six students featured aspects of how to cope with change in relation to new technologies, today's economic environment and social change. To achieve educational outcomes on these issues students learning preferences were for teleconferencing, video tapes, audio tapes and written materials. Also included was a section on Maori views of the future and how Maori people coped with change.

3.7 Students requested that their peers who were handicapped in some way not be disadvantaged if absent from teleconferencing sessions. The course was, therefore, structured so these students could still succeed in their study.

SOUTHLAND PROJECT ORGANISATION

3.8 To ensure students had appropriate learning resources the steering committee commissioned Christchurch Polytechnic to produce three videos. In addition Wellington College of Education made one video. A video made by the Brisbane College of Advanced Education was edited to suit the Southland course. Course notes were provided by the project officer supplemented with material from the Futures Trust.

3.9 20 teleconferencing centres were established in community facilities. Each centre was managed by a centre co-ordinator. The co-ordinators responsibilities were to organise sessions so that all arrangements were in hand and contingencies provided for. Centre co-ordinators were also the strategic persons to oversee equipment, respond to students concerns and to link with Alison Broad.

3.10 Teleconferencing tutors were persons who had appeared on the videos or had relevant expertise. To select and brief these tutors involved considerable work. Each tutor had to be made familiar with the course and their expected role in their teleconferencing session.

3.11 Course tutors were located at Southland Polytechnic. Their responsibilities were to supervise teleconferencing sessions, package and post course material, tutor students and respond to their requests. It was later realised this task was too big for 1.5 tutors.

THE HAURAKI-COROMANDEL PILOT

3.12 In February 1988 Jeanne Macaskill, Pennie Brownlee, Waikato Polytechnic and Christine Ma'auga, Bay of Plenty Polytechnic visited 20 Hauraki and Coromandel centres. Potential students requested a course on small business management. This became "Minding My Own Business".

3.13 The curriculum was based on replies to a postal questionnaire received from 50 students. They requested "Minding My Own Business" cover information on how to set up a small business, how to budget and how to establish a viable business. Students also requested modules on taxation, how to borrow finance and stress management. Maori women's interests were also included.

3.14 The delivery systems chosen by students were the same as for Southland namely, audio and video tapes and written material. Instead of teleconferencing students asked for computer-aided learning and written material. As for Southland the needs of disadvantaged students were considered. Students requested they should not have to travel too far to a computer centre.

HAURAKI-COROMANDAL COURSE PRODUCTION AND DELIVERY

3.15 Course production and delivery was organised as follows:

* Video and audio tapes were produced at Waikato Polytechnic with the help and co-operation of Hamilton Teachers College and the University of Waikato. Two audio tapes for radio broadcast were made at Parumoana Community Polytechnic.

* Waikato Polytechnic developed computer software.

* Christine Scott, Tutor Development Unit, Waikato Polytechnic co-ordinated the project.

* Three half-time tutors provided teaching services. As each tutor lived in the area this made them accessible toll-free to their students.

* Two programmes were broadcast over National Radio.

* Tutors responses to students assignments were either by letter or audio tape.

* Twenty centre co-ordinators were trained to manage the centres and look after equipment. The co-ordinators distributed material as required, answered queries and dealt with students enquiries.

* At the end of the project students completed evaluation forms. These provided a full account of information for the steering committee and are summarised in Appendix E, page 34.

SUMMARY

3.16 Appendix D, page 32 sets out the project personnel. For these people to be selected and trained was an achievement in itself. While the steering committee could resource the projects it was dependent on local networks organisation and creativity to provide quality course development, delivery and back-up. Future open learning project organisers are recommended to plan well ahead for every contingency and to recruit as qualified and competent personnel.

SECTION 4

PILOT PROJECT OUTCOMES

THE STUDENTS WHO BENEFITED

4.1 A total of 600 rural women benefited from these pilot projects, 300 in each region. This section provides an account of the project outcomes. Readers are also referred to students evaluation presented in Appendix E, page 34.

4.2 In Southland most participants were in the 30 to 50 age group. The single largest group were 40 years old. Students occupations included a bank clerk, hairdresser, horticulturalist, industrial chemist, librarian, author, physiotherapist, dental nurse, journalist, landscaper, telephonist, machinist, accountant and manageress. This information was provided by Julie Thomas in her Lincoln College research report on this project.

4.3 40% of students had experienced some form of distance education before, mainly as Correspondence School students when children. Some students had tertiary qualifications or had done some tertiary study. Other students were hesitant to enrol because they had little educational experience as an adult. Most had not experienced teleconferencing before. At the end of the pilot several students said they had gained sufficient confidence to try further or formal study.

THE LEARNING TECHNOLOGIES USED

4.4 The mix of technologies used was a key to the success of the pilot courses. For each project these were varied with each selected for its most suitable learning purpose. With the continued development of new technologies greater use and increased mix of learning technologies can be made. Reader's attention is directed to Appendices B and C which set out the considerable potential of broadcast technologies and future options for these.

4.5 The successful use of video tapes depended on students access to video players. In both pilots many students did not have access to a player and had to view the video at another student's home. Only 18% of the Southland students had videos. To get the most use from video tapes it is necessary to view them two or three times. This was not always possible. Video tapes also need supplementary written material. This was overlooked with several of the videos.

4.6 Commercial video production rates can be very expensive. Production costs are lower if use can be made of an educational institutions facilities. The videos produced by Christchurch Polytechnics were expensive because they used commercial editing services. Although relatively cheap videos can be purchased from overseaswith producer's approval these may need to be edited to suit New Zealand requirements. This was experienced with Brisbane College of Advanced Education's video. Editing costs need to be budgeted for and controlled as do all aspects of video production.

4.7 Students responded positively to the use of audio tapes. They preferred audio tapes to radio educational programmes and to videos. This was because students could study in their own time. Students spoke enthusiastically of being able to play audio tapes and study them while doing farm jobs. In addition audio tapes of teleconferencing sessions helped students to reinforce learning. Audio tapes have the added advantage of being inexpensive to post.

4.8 To provide teleconferencing sessions for 300 women at twenty centres was a major exercise. The success of teleconferencing was for these reasons:

- students came into contact with many other regional women;
- peer group learning took place through debate and discussion;
- students did not have to travel very far to their local centres;
- teleconferencing tutors were recognised experts either from New Zealand or overseas.

4.9 The Hauraki-Coromandel pilot proved computers were a stimulating medium by which to study. Students stated their satisfaction with computer-based learning as they:

- learned to overcome a fear of computer technology and learned to use it effectively;
- found it the ideal way to study business matters;
- found the computer print-out very useful as a learning exercise;
- did not have to travel far as the computer was locally based.

4.10 The students responses to the radio broadcast were as follows:

- the set time of broadcasts was subject to the interuptive demands of small children, visitors or the telephone.
- although broadcast content was good students lost their concentration after ten or fifteen minutes.
- students were not used to concentrated learning by broadcast.

These responses demonstrate that although radio is a potentially open medium there are important learning factors and contingencies which have to be provided for in open learning broadcasts.

FINANCES

4.11 The total funds allocated for the projects were $205,000. A summary of the actual costs were as follows:

	$
Salaries and travel	51 000
Southland pilot	82 000
Hauraki/Coromandel pilot	72 000
Total	$205 500

Further details are provided in Appendix A, page 23

4.12 The cost per student hour was $8.85 an hour. This includes the high cost of producing the first set of resources. The pilot project resources could be adapted for re-use at little cost. This would reduce the cost per student.

OTHER PERTINENT OUTCOMES

4.13 Comment was made in para 1.8, page 4, of the need to establish effective project financial management systems. This includes budget plans, approval to expend and approval of payments. This avoids any possibility of misunderstanding, criticism or cost overruns. Attention is also drawn to para 4, Appendix A which lists those people and organisations whose contributions ensured the projects were kept within budget.

4.14 There were some limitations as to the extent of the openness of learning possible. These were mainly:

- the set time and time restrictions of teleconferencing sessions which were not convenient for all students;
- enrolments had to be limited to 300 students as this was the largest number which could be provided with administrative and tutorial support;
- production and delivery time limitations restricted students individual rates of progress;
- time rosters for computer access meant students could not log-on when they wished to;
- women who did not own a video player could not view the videos several times to help reinforce their learning.

OPEN LEARNING COURSES THROUGH INSTITUTIONS

4.15 Only with great effort were the courses ready for each pilot. The time required to write and produce courses for open learning at a distance must be realistically planned in any future developments.

4.16 To develop open learning programmes requires a different attitude from institutional providers compared to nationally prescribed or tutor-driven courses. Institutions must listen to the needs of students and attempt to cater for the needs of both individual students and the student group. Where students determine the content of the course effective learning will result.

4.17 Open learning should not be confined to pilot projects, rural women or distance education. These projects proved open learning is an open invitation to all education providers to develop this form of learning.

SUMMARY OF OUTCOMES

4.18 The success of the pilots was due to the:

* goodwill and enthusiasm engendered through visits to students;

* co-operation and co-ordination between institutions departments and individuals to produce the materials for the courses;

* sound course planning and writing which was sensitive to the needs of students;

* delivery of the programmes with a mix of technologies each chosen carefully for its appropriate role;

* attractively produced materials which were in a style appropriate for students and delivered on time in spite of difficult deadlines;

* quality of sensitive and responsive tutoring as acknowledged by many students;

* effective marketing of these unique courses.

SECTION 5

FUTURE HORIZONS

EDUCATIONAL DIMENSIONS OF TECHNOLOGIES

5.1 The pilot projects reinforced the positive relationship between technology and education. Technology has traditionally benefited education in many ways. Previous sections have set out the range of technology combinations used in the pilot projects. These combinations and the environment in which they were used were a New Zealand first. Yet the steering committee was aware of the extensive range of technologies which could have been used. The future holds considerable promise in the extent and variety of technology possibilities in open learning and distance education.

5.2 Neville Lane, NZ Broadcasting Corporation sets out the future technology possibilities in Appendix B, page 25. He delineates the technical aspects of television and radio broadcasts by terrestrial and satellite modes. While Neville Lane points out the potential he concludes the technology must be affordable and appropriate to the intended objective. This is a salutary reminder.

5.3 In Appendix C, page 29, Val Brooke-White, Radio New Zealand, stresses the complementarity between education and radio services. Val Brooke-White outlines present services and those developments which are in train. In para 6 she sets out the two essentials for Radio New Zealand broadcasts, namely costs and quality factors in any future open learning projects. Readers attention is drawn to Val Brooke-White's comments on Access radio which has considerable distance education potential.

5.4 Neville Lane and Val Brooke-White highlight an important open learning educational principle. Radio and television broadcasts are essentially one way rather than interactive. Educational technology at economic rates will no doubt be available in the future which provides for interactive multi-media open learning. Open learning must be interactive whether it be in a class situation or by distance education. The value and benefit of recorded and replayed broadcasts have considerable educational value and benefit. This can be at all ages, stages and modes of learning.

5.5 While one can be impressed with the potential of present and future technologies there is a fundamental premise which can be easily overlooked. This is, educational technology must be based on effective educational principles. The use of technology in education must be the outcome of thoroughly researched, planned, structured and delivered learning programmes. Quality education and quality technology must be equal partners. Open learning takes this one step further. In open learning the students must be involved in the planning and programmes must be appropriate to students needs. In addition open learning must be culturally sensitive and cognisant of students space, pace and style of learning.

5.6 In the open learning pilots new technologies were trialled on a modest scale. This was in contrast to a number of overseas projects where sophisticated and costly technologies have been used. Yet it has been reported several of these projects failed because insufficient research was done into students learning needs. The steering committee within its budget and through the project officer ensured students needs were of primary importance and their involvement paramount.

OPEN LEARNING FUTURES

5.7 Open learning aims to maximise students learning choices and opportunities. In effect open learning enables students to study WHAT, WHEN and WHERE they like and to use whichever learning media is best suited to them. Open learning is learner centred with the outcome objective to develop independent learners who can better cope with future change. Although the pilot projects targeted women open learning is for all people at all stages of their learning. What are the future implications of open learning for New Zealand's continuing education sector?

5.8 The implication is that more students should be given the opportunity to negotiate what they wish to study, the mode of their study and the time and place of their study. Such changes would have considerable impact on present institutional structures and programmes. This in turn will affect the range and type of continuing education courses made available. It will also require new open learning curriculum and student support services. A Department of Education sponsored Lopdell Centre conference agreed it is the process not just the outcome which determines what is open learning. Appendix F, page 38 provides an important check list of criteria by which open learning processes and outcomes can be assessed.

5.9 This conference also agreed on a number of principle requirements for open learning to be an effective future educational development. These were for:

- open learning principles and practices to be a mandatory charter requirement.
- access to open learning to be enhanced by the removal of course entry barriers.
- open learning providers to recognise and address equity.
- providers to recognise the specialist skills and time required to produce open learning resources for class contact and distance education modes.
- open learning resource development to be effected by co-operative ventures complemented by a national open learning data base.
- adequate and distinctive open learning student support services to be a prerequisite.
- open learning opportunities to be rigorously marketed to potential students.
- open learning as a process to be promoted to teachers and students.
- open learning courses to satisfy quality assurance, validation and accreditation requirements.
- students who study at a distance to have equal status with their class contact peers.

5.10 How these suggestions can be best effected is contingent on several critical factors. The first is the extent which these initiatives can be nationally resourced and co-ordinated. This is dependent on the outcome of the implementation decisions for a restructured post compulsory education and training system. The second factor is providers and communities willingness to promote open learning. The pilot projects demonstrated both the need for and potential of open learning. Ready made programmes already exist. These can be repeated or adapted to the benefit of more people. The steering committee recognises the financial implications of future developments in open learning. It is nevertheless confident providers will satisfy these as best as they can to the benefit of students.

5.11 The above comments suggest open learning should be developed through tertiary institutions. To date this has been the case. The steering committee recognises the need for people to have non-formal educational opportunities. These should also be available through distance education. For students non-formal open learning could be an end in itself. It could also be the impetus or a bridge to continuing education. The permutations are many and varied. Of particular concern to the steering committee are persons disadvantaged by distance from continuing education opportunities. It was for these people that the open learning projects were piloted in Southland and Hauraki-Coromandel. These pilot projects pointed out the unmet needs which no doubt exist in other rural areas of New Zealand.

5.12 Communication technology now enables effective and interactive education at a distance. Both Australia and Canada have developed programmes for their indigenous people. The steering committee was mindful of the need for open learning opportunities for New Zealand's tangata whenua. We look forward to open learning programmes which are marae based and co-operatively developed to meet the needs of the Maori iwi. To this end open learning is conducive to group learning, growth and development for persons who are Maori, Pacific Islander and from other ethnic groups.

SUMMARY

5.13 The future horizons for open learning are boundless.Technological advancement will undoubtedly enable more people to receive quality education and not be disadvantaged by distance. Open learning as a process has the potential to involve more people and for them to determine their educational and developmental future. This must contribute to the well-being of individuals and society.

5.14 The steering committee has achieved its target namely to conduct two effective pilot projects which used open learning processes, a combination of new technologies and distance modes of education. Through the co-operative efforts of many people this target has been successfully accomplished. The challenge is now for others, equally keen and more expert, to develop further open learning opportunities for people who will benefit as did those in Southland and Hauraki-Coromandel. May those who promote open learning gain as much satisfaction from their endeavours as did those involved in these pilot projects.

APPENDIX A

PROGRAMME COSTS

1 $205,000 was allocated for the open learning programme. This comprised $100,000 and $105,000 for the 1987/88 and 1988/89 financial years respectively.

2 The $205,000 allocation was spent in general categories as follows:

	$
Southland project	82 000
Hauraki-Coromandel project	72 000
Secondment salaries and travel (Note a)	51 000
Total (Note b)	$205 000

3 Details of project expenses were as follows:

	Southland	Hauraki-Coromandel	Total
	$	$	$
Administration	3 975	-	3 975
Audio-visual material	28 864	16 800	45 664
Salaries	24 800	48 755	73 555
Software Development		5 445	5 445
Teleconferencing equipment (Note c)	20 027		20 027
Travel	4 334	1 000	5 334
Total	$82 000	$72 000	$154 000

Notes:

a Secondment salaries and travel for Brian Pauling 1987/88 and Jeanne Macaskill 1988/89.

b Actual and estimated costs as at 30 November 1988.

c Net of the sale of teleconferencing units at $40 000.

4 In addition to the above expenses, cognisance is given to the following expenses which did not come to charge against the programme allocation:

* NZTCI's printing of materials at a minimal cost.

* Additional administration and computer equipment expenses incurred by Waikato Polytechnic. These are estimated at $20 000.

* Administration costs which includes salaries, office expenses, printing and travel absorbed by the Department of Education. These are estimated at $50 000

* The time given by steering committee members polytechnic tutors, project co-ordinators and may other people whose satisfaction was the voluntary contribution they made to the success of the programme.

APPENDIX B

TECHNOLOGY OPTIONS FOR OPEN LEARNING AND DISTANCE EDUCATION

Neville Lane, New Zealand Broadcasting Corporation.

INTRODUCTION:

1 As background, and for future reference, the following are brief descriptions of alternative delivery technologies, together with perceived merits and demerits.

TELEVISION - TERRESTRIAL

2 Universally available with coverage of both Television New Zealand (TVNZ) channels, which could extend to almost 100 percent of the population.

3 Television is a powerful but expensive medium, both in terms of costs of production and for acquisition of facilities, either by purchase or by lease. It does not permit interactive learning by direct means but combined with teleconferencing can become interactive.

TELEVISION AND RADIO - SATELLITE

4 At least one Radio New Zealand (RNZ) signal is available over most of the country. Both Amplitude Modulation (AM) and Frequency Modulation (FM) are employed for radio transmission - FM is generally simpler and cheaper to implement and is suited to both small area coverage and wide areas.

5 As with television, radio is a one-way medium. Since most radio stations operate for 24 hours each day, access for separate programming at suitable times is difficult to arrange. Radio as an educational medium follows this section as Appendix C.

TELEVISION AND RADIO - SATELLITE

6 The availability and usage of satellites for broadcasting is increasing worldwide. However, in New Zealand, the satellites available are primarily for communications and are of relatively low power. This requires the use of large dish aerials for reception when used for broadcasting purposes.

7 In three to four years time, Australian satellites should be available which will enable smaller dishes to be used, of the order of one to two metres in diameter.

8 The lease costs of satellites are very high. They require high powered and expensive ground stations to transmit programmes to them. Such costs and complexity go against the prospect of two-way (interactive) services. In time, relatively low cost terminals are expected to become available for use with future generations of satellites.

TELEVISION AND RADIO - CABLE

9 Cable services are very expensive to implement. While they are widely employed overseas, particularly for television, none is installed in New Zealand. A major advantage of cable is the potential for truly interactive communications.

10 A cable system in New Zealand for television purposes only is unlikely, except perhaps in major population centres, in the foreseeable future. Nevertheless, as Telecom New Zealand proceeds with its installation of the Integrated Services Digital Network ISDN, the potential for all kinds of services including television and radio to be carried on it, can be developed.

SUPPLEMENTARY SERVICES WITH TELEVISION AND RADIO

11 Several means exist for carriage of additional and separate information with television and radio signals. Some of these are available for dissemination to members of the public equipped to receive them. A familiar example is Teletext, available on both TVNZ networks.

12 Multi-channel sound, a technique for providing additional sound channels in television, is now being examined and will be introduced into New Zealand television services in due course. Additional sound and data services for FM radio are also being investigated with the view to their eventual introduction.

13 To make further channels of information available, such services incur additional production costs. They require additional receiving equipment and are one-way media.

VIDEO CASSETTE RECORDS (VCR's)

14 These are a convenient medium for the exchange of information, with the costs of tapes being relatively cheap. Nevertheless, the production costs for many copies of a particular programme are high because of the cost of plant for duplication and the time required for copying.

15 VCR's have the useful feature of being fitted with programmable timers which enable recording of programmes broadcast at hours which would otherwise be inconvenient. Ironically, such a timer option is rarely available with audio cassette recorders.

IMPLICATIONS OF DE-REGULATION OF BROADCASTING

16 With de-regulation of broadcasting imminent in New Zealand, timed nominally for 1 April 1989, there is the prospect of new television and radio stations being developed by ad hoc groups. Such groups could include: ethnic and minority interests and educational bodies, in addition to those entrepreneurially oriented.

17 Ideally, transmission facilities would be developed and cost-sited with existing operations, specifically RNZ and TVNZ, in order to reduce establishment costs and bring about economies of scale through sharing and leasing of facilities.

18 However, it must be borne in mind that de-regulation is expected to be accompanied by a means of allocation of the frequency spectrum at a cost to users. The nature of the allocation process and the extent of charges is yet to be determined by the Government which has commissioned an independent report on the matter. Whether the charges will influence the rate of entry of new operators into the market is yet to be determined.

GENERAL

19 Any proposed new service using one of the several new technologies becoming available must take into account the least times required to establish technical standards and for the intended sector of the public to equip itself to receive the new services once the appropriate equipment becomes available. In addition, questions of programme copyright, programme standards and editorial control must be set in place when developing a new service or new range of programming on an existing service.

CONCLUSION

20 Finally, it is essential that the technology must be appropriate to the intended objective and be affordable. In the development of any new service it is necessary to first define the size and location of the target audience, and its needs. Then choose the appropriate delivery technology to fit the application, with due regard to its costs and benefits.

APPENDIX C

RADIO AS AN OPEN DISTANCE EDUCATION DELIVERY SYSTEM

Val Brooke-White, Radio New Zealand Limited

GENERAL

1 Radio remains one of the more potentially effective means of delivering education material to those adults who, from necessity or inclination, do not make use of institutionally-based learning opportunities. Educational radio programmes are relatively cheap to produce. Radio is also portable, and delivered into the listener's home or work-place, to an audience familiar with its technology.

2 Radio has two main drawbacks. The first is its lack of user-control over the pace at which material is delivered and over times of broadcast. The latter is a problem compounded by the absence in New Zealand of a ready source of supply of the timing devices required for reliable, pre-set off-air recording. The second is radio's essentially ephemeral nature. Its development as an effective medium for delivering distance education is, therefore, contingent on its use in planned conjunction with other media, and with the establishment of an off-air, tape retrieval system for learners.

RADIO NEW ZEALAND

3 Since 1976, Radio New Zealand has broadcast its own non-formal, adult education programmes. Designed in structured series, on a project basis and supported by printed material, (also produced by Radio New Zealand), these programmes have been broadcast, as appropriate, on both National Radio and Radio New Zealand's commercial stations. Ouptut has included series for a Maori audience, both in English and Maori.

4 Where possible, the co-operation of community agencies - not always education institutions - is sought in organising local discussion groups and related courses on a series' topic, at the time of broadcast.

5 In addition, cassette recordings of these radio series are made available through the Department of Education's Tape Duplication Service, by means of which many schools, community groups and individual members of the public have ready and affordable access to the programmes for off-air use.

6 National Radio and various commercial stations have, from time to time by arrangement with individual station managers, also broadcast programmes produced by educational organisations themselves, whilst some community educators have regular access to air-time on their local, commercial station. Few of these programmes deliver distance education, tending simply to describe some of the producing organisation's current activities, or to promote forthcoming "on-campus" courses.

7 A possible future option for delivering learning programmes produced by institutional educators is the YC-AM network, currently being relinquished in favour of FM by the Concert Programme.

8 Successful negotiation with Radio New Zealand for access to any of the above-mentioned transmission facilities for the broadcast of programmes produced by educational organisations themselves hinges to two principles. The first is the ability of such users to meet the associated costs. The second is to offer stations programmes of marketable quality.

9 Wellington Access Radio provides a free, regional outlet for local, volunteer producers from a wide range of community groups, whilst some commercial stations offer a certain amount of regular access time within their standard programming format.

10 Radio Aotearoa plans for the permanent establishment of a Maori radio network are well advanced. Its planned output includes the broadcast of educational programmes, in both Maori and English.

11 Maori tribal broadcasting initiatives may provide yet another future option to educators, wishing to target distance education at this sector of the radio audience.

12 Private, commercial stations. At the time of this report's writing, the involvement of private radio stations in either the production or broadcast of educational programmes has been negligible and seems likely to remain so, given present programming trends and the commercial realities of an increasingly competitive and de-regulated radio industry.

13 Community access stations. In 1987, Christchurch Polytechnic joined Radio New Zealand in a co-operative venture, the Canterbury Communications Trust, and launched a community access station in Christchurch. Plains FM aims to support a varied range of access programmes, including educational ones, by means of community sponsorship, user membership fees and limited commercial advertising. At this time, plans are underway in Auckland for a similar community venture, involving Radio New Zealand, Auckland Access and Auckland Technical Institute.

APPENDIX D

PILOT PROJECT PERSONNEL

SOUTHLAND PILOT

ORGANISERS - Alison Broad, Southland REAP
- Carmen McMillan, Southland Polytechnic
- Elizabeth Cruikshank, Southland REAP

TUTORS - Christine McKenzie and Trish Lindsay

CENTRE CO-ORDINATORS

G Learmouth, J Soper, M Hunter, B Boult, B Smith, E Ruddenklau, S Collie, D Stuart, M Casey, J Howie, P McLellan, J Shallard, F Wise, A Milligan, J MacDonald, M Lamont, E Tayles, G Swift, H McKay, G Gorrie.

For Telecom - Jim Scarlett

These are a few of the many people who helped with this pilot. There were many others who included the personnel of Southland REAP, Southland Polytechnic, staff of many Southland schools who lent rooms and equipment and the 300 women who enrolled for the 10 week course and filled in many questionnaires and evaluation forms.

HAURAKI-COROMANDEL PILOT

ORGANISERS - Pat Irving, Christine Scott and Pennie Brownlee

TUTORS - Diane Carnie, Alison Honeyfield and Chris Collins

CO-ORDINATORS

Lynette McHardie, Ann Young, Ngaio Hanson, Suzanne Barker, Judith Bishop, Audrey Joyner, Rae Fern, Helen Curtis, Lynda Green, Erica Hale, Judith Simpson, Brigit Chilwell, Pamela Lees, Gonny Ormsby, Mary Miers, Margaret Hawkeswood, Patricia Rogers Maureen Ball with special assistance from Christine Ma'auga.

The steering committee acknowledges the work of key staff members of Waikato Polytechnic who gave their time and energy to launch this pilot.

For each pilot we acknowledge the contribution made by the 300 women who took part in their project. Without their help and enthusiasm each regional pilot project would not have been the success it was.

APPENDIX E

STUDENTS' EVALUATION

INTRODUCTION

1 This appendix gives a summary of students comments as well as statistics collected at the end of the pilot.

STUDENTS

2 In both pilots the majority of the students were in the 30 to 50 year age group, 77% in Southland 70% in Hauraki.

- 49% of Hauraki students had no tertiary education.
- For 62% of the Hauraki women this was the first time they had enrolled for a continuing education course.
- 90% of students enrolled in the pilots to support them and to indicate there should be more courses in their region.
- The next reason given by most for enrollment was that they were not required to travel very farm from home.
- Studying at one's own pace was particularly popular, namely 83% in Hauraki and 50% in Southland.
- The course theme appealed to 71% of Hauraki enrolments. Only 32% of Southland students said they enrolled because of the topic.
- In Southland the idea of being involved in an experiment appealed to 62% of the women.

TECHNOLOGIES

3 Students responses to the use of technology were as follows:

- The preferred technology were audio tapes.

- Southland women's learning was stimulated by teleconferencing and audio tapes. They found printed material to be most effective.

- Hauraki-Coromandel women found the combination of audio and video tapes most helpful for their learning.

- 63% of Hauraki-Coromandel women had never used the computer before. Only 13% of women had one at home.

- 26% of Hauraki-Coromandel students wanted to learn more about computer use.

- In Southland 18% of students did not have access to a video player. In Hauraki this appeared to be only around 6%.

- Teleconferencing was a very popular way to learn because of group interaction.

- All the technologies used were considered useful for learning. The appropriate mix was the key to the success of the programme.

- Radio broacasts were not a popular learning medium. This was mainly because broadcast times were not convenient to students.

STUDYING

4. The three comments below indicate students studying preferences.

- Both pilot groups enjoyed studying alone at their own pace and time.

- Southland students enjoyed the interaction of teleconferencing.

- 57% of Hauraki students considered it was not necessary to have direct contact with other students.

OTHER COMMENTS

5 The following are a sample of informal comments made by Southland students:

- Wonderful to be contacting all sorts of women throughout Southland through teleconferencing.

- Highlights were the Brisbane module and the session Maori women.

- Many thought this was a relaxing way to study.

- Rural women need more courses like this.

- A large number thought it was very good self-development course.

- Discussions at the centre were a highlight.

- Tutors were excellent. Their letters and comments were much appreciated.

- The time taken for the teleconferencing link-up was frustrating.

- More time was needed for discussion after the teleconferencing sessions.

- Many women were unable to complete the written work due to other commitments.

- The course was too long.

- Some found the work too extensive for the time allowed.

- Access to research material was a problem.

6. Listed below are the informal responses of Hauraki-Coromandel students.

- Contact with other women was appreciated. The chance to study using a variety of media at their own pace.

- Some women found it difficult to particpate fully as they had other commitments.

- Highlights included the opportunity to use a computer, the written material, and the chance to meet with other women.

- The group session to introduce computer equipment was an important key to the success of the course.

- Several women stated they had learned the necessary skills to start a small business.

- Modules covering taxation and cashflow were very helpful.

- Women wanted to use the computers as more than a learning aid.

- A wish to learn more about computers.

- Frustration at the lack of backtracking facilities on the computer programme.

- Many women requested a tutorial session to exchange information and have contact with their peers.

- The time of year meant many women had too many commitments to participate fully. Winter was suggested as a more convenient time.

- The module on stress would have been more appropriate at the end of the programme.

- The need for more courses of this type.

APPENDIX F

OPEN LEARNING CHECK-LIST

Set out below are a series of check-list questions pertinent to the planning of an open learning programme. Each question requires either a yes or no answer.

1 Will students or their representatives be involved in the:

- course's curriculum design and development?
- determination of equity based enrollment criteria?
- editing course materials for language and presentation standards?
- learning delivery options?
- mix of technologies to be used?
- formulation of the course evaluation questionnaire?

2 Will students have the opportunity to comment on the:

- cost of their course of study?
- appropriateness of communication style?
- quality of the course as it progresses?
- value and validity of assessments?

3 Will students have the right to choose the:

- modules which they wish to study?
- pace and time at which they wish to study?
- persons with whom they wish to study?

- environment in which they wish to study?
- learning activities they wish to use?

4 Will students have:

- open enrolment to the course?
- access to tutor assistance and guidance?
- optimum control over their learning?

5 As a result of the course will students:

- receive reported outcomes of their course as a whole?
- be more independent learners?
- want to continue with their learning?
- be more independent learners?
- acquire new attitudes and skills?
- better understand and respond to the world around them?

For a course to meet open learning criteria all the above questions must have yes as an answer.

V. R. WARD, GOVERNMENT PRINTER, WELLINGTON, NEW ZEALAND—1989

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